

Application Serial No. 10/582,700
Reply to Office Action dated October 28, 2008
Amendment dated February 24, 2009

AMENDMENTS TO THE CLAIMS

Please amend claims 1, 2, 4-20, 22-24, cancel claim 3, and add new claim 25, as follows.

Listing of Claims

1. (CURRENTLY AMENDED) Aircraft floor heating for an aircraft, comprising:
an aircraft;
an avionics bay within the aircraft and containing electronic equipment;
a floor (20) within the aircraft made up of heatable panels (18) defining a plurality of first hollow chambers (26) formed integrally with the panels and wherein each chamber has a first end and a second end, and is enclosed therebetween; and
a feed line (28) operatively connected to the first ends of the first hollow chambers (26) for supplying thereto and providing fluid communication between the avionics bay and the first ends of the first hollow chambers, the feed line supplying warm waste air to the hollow chambers, the warm waste air originating which originates from the cooling of the electronic equipment contained in the avionics bay.
2. (CURRENTLY AMENDED) Floor heating in accordance with claim 1, characterised characterized in that the first hollow chambers (26) extend in the longitudinal direction of the aircraft inside the panels (18).
3. (CANCELLED)

4. (CURRENTLY AMENDED) Floor heating in accordance with claim 1, characterised characterized in that the second ends of the first hollow chambers (26) are in flow connection with a plurality of second hollow chambers (32) defined by the floor panels (34) of an aft-located cargo hold door (24) of the aircraft.
5. (CURRENTLY AMENDED) Floor heating in accordance with claim 4, characterised characterized in that the second hollow chambers (32) terminate into the aircraft fuselage (10).
6. (CURRENTLY AMENDED) Floor heating in accordance with claim 1, further comprising:
a first bleed air feed line operatively connecting the first ends of the first hollow chambers (26) to a first supply of hot bleed air from the engine of the aircraft.
7. (CURRENTLY AMENDED) Floor heating in accordance with claim 6, wherein the second ends of the first hollow chambers (26) are in flow connection with a plurality of second hollow chambers (32) defined by the flow panels (34) of an aft-located cargo hold door (24) of the aircraft, further comprising: a second bleed air feed line operatively connecting the second hollow chambers (32) to a second supply of hot bleed air from the engine of the aircraft.

8. (CURRENTLY AMENDED) Floor heating in accordance with claim 7, characterised characterized in that the cross sections of the first and second bleed air feed lines determine the amount of hot engine bleed air supplied.
9. (CURRENTLY AMENDED) Floor heating in accordance with claim 1, characterised characterized in that the panels (18) are thermally uncoupled from a structure which supports the floor (20).
10. (CURRENTLY AMENDED) Floor heating in accordance with claim 1, characterised characterized in that the panels (18) are provided with electric heating mats for supplementary heating.
11. (CURRENTLY AMENDED) Floor heating in accordance with claim 10, characterised characterized in that the electric heating mats are positioned on the lower side of the panels (18).
12. (CURRENTLY AMENDED) Floor heating in accordance with claim 1, further comprising:
electric heating coils and/or wires or wires integrated into the first hollow chambers (26) for supplying-supplementary heating therein.

13. (CURRENTLY AMENDED) Floor heating in accordance with claim 1, further comprising:

ventilators positioned in the first hollow chambers {26} to generate a forced flow through the first hollow chambers {26}.

14. (CURRENTLY AMENDED) Floor heating in accordance with claim 1, characterised characterized in that the panels {18} are provided with thermal insulation {42} on their lower side.

15. (CURRENTLY AMENDED) Floor heating in accordance with claim 1, characterised characterized in that the panels {18} are profile elements produced by extrusion, in particular by continuous extrusion.

16. (CURRENTLY AMENDED) Method for heating the floor of an aircraft, comprising:

conveying warm waste air through a first plurality of hollow chambers defined by extending through the panels forming the floor, the warm waste air having originated from the cooling of electronic equipment of the aircraft; and maintaining fluid isolation between the warm waste air and air in a cabin of the aircraft.

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17. (CURRENTLY AMENDED) Method in accordance with claim 16,
~~characterised~~ characterized in that the warm waste air is conveyed through the panels in the longitudinal direction of the aircraft and counter to the flight direction.
18. (CURRENTLY AMENDED) Method in accordance with claim 16,
~~characterised~~ characterized in that the warm waste air originates from the aircraft's avionics bay.
19. (CURRENTLY AMENDED) Method in accordance with claim 16,
~~characterised~~ characterized in that the warm waste air, after having flowed through the first plurality of hollow chambers in the panels forming the floor, is thereafter conveyed through panels that form a cargo hold door for the aircraft.
20. (CURRENTLY AMENDED) Method in accordance with claim 19,
~~characterised~~ characterized in that the warm waste air flows out into the aircraft fuselage after having flowed through the floor panels of the cargo hold door.
21. (PREVIOUSLY PRESENTED) Method in accordance with claim 16, further comprising:
mixing hot bleed air from the engine with the warm waste air that originates from the cooling of the aircraft's electronic equipment, the mixing of the hot bleed air and the warm waste air occurring before conveyance to the first plurality of hollow chambers.

22. (CURRENTLY AMENDED) Method in accordance with claim 19, further comprising:

mixing hot bleed air ~~into from~~ from the engine with the warm waste air that originates from the cooling of the aircraft's electronic equipment to create a first mixture, the mixing occurring upstream of the first plurality of hollow chambers of the floor, and also mixing in additional hot bleed air from the engine downstream of the first plurality of hollow chambers of the floor, but upstream of the cargo hold door.

23. (CURRENTLY AMENDED) Method in accordance with claim 16, characterised characterized in that the panels forming the floor are additionally heated by electricity.

24. (CURRENTLY AMENDED) Method in accordance with claim 16, characterised characterized in that a forced flow is generated in the hollow chambers.

25. (NEW) The method of claim 16, further comprising:
directing air from the first hollow chambers into the cabin or outside the aircraft after the warm waste air has cooled.